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II. — *On the Nature and Designation of the Accent in Sanskrit.*

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This paper was originally intended only to give such an exposition of the nature of the Sanskrit accent as should illustrate and support the views presented by Professor Hadley in the preceding paper respecting the Greek accent. It has seemed best, however, to treat the subject somewhat more comprehensively than that intent would demand, because full and correct knowledge of Sanskrit accentuation is less accessible to scholars in America than it ought to be. The Sanskrit grammars in English which are most used among us (Monier Williams's and Max Müller's) hardly touch accent at all;* and the older works ignore it altogether; while to the treatment of the matter by Oppert and Bopp (and even, in a less degree, by Benfey) much exception is to be taken. To the student of classical Sanskrit merely, accent is a matter of subordinate consequence; no one pretends to give the Sanskrit words their proper tone, and it is the general custom among Western scholars to pronounce them according to the rules of Latin accentuation. This is because the accented syllable is, in the majority of words, unknown; the written texts are not marked for accent, and the notices of the native grammarians are not sufficient to supply the lacking knowledge. With the Vedic student, the case is otherwise; the Vedic texts of the first class (namely, the original Saṁhitās of the Rīg, Sāma, Yajur, and Atharva Vedas) are completely accented, and also several works of the second or *brāhmaṇa* class (namely, the two principal *brāhmaṇas* of the Yajur-Veda, the *Çatapatha* and *Tāittirīya Brāhmaṇas*, and the *Tāittirīya-Āraṇyaka*);† and the accent is a highly important element in aiding

* Müller's second edition, which has appeared since the above was written, accents its paradigms, and gives an Appendix on the general subject.

† All the works here mentioned are either published or publishing, and will be soon accessible in printed form, complete.

both the grammatical and the lexical comprehension of the texts. And, of course, every student of the history of the Sanskrit language, or of the history of Indo-European language by the aid of the Sanskrit, requires to understand thoroughly a part of the phonetic structure of the latter which is so fundamental in its character, and has exercised so powerful an influence in the shaping of words and forms.

In investigating the nature of the Sanskrit accent, we are not limited to the drawing of inferences from the facts of accentuation laid before us in the texts; our chief sources of knowledge are the Hindu grammarians, who have treated the subject, as they have most other departments of grammatical theory, with great fullness and acuteness. The great grammarian Pāṇini, whose work has become the acknowledged authority for all after time, is clear and intelligible in his statements as to accent; and upon the foundation of his work and its commentators alone, without access to any accented texts, Böhtlingk gave in 1843* an acute, intelligent, and very correct account both of the theory and of the main facts of Sanskrit accent, one that in many respects has not been surpassed or superseded by anything that has since appeared. But the brevity of Pāṇini is most acceptably supplemented by the more detailed statements of the Prātiçākhyas. These are treatises which attach themselves each to a single Vedic text, as phonetic manual of the school to which that text belongs. They deal with all the elements of articulate utterance—with the mode of production and the classification of articulate sounds, with accent and quantity, rules of euphonic combination, and the like; and they prescribe how the various forms of text in which their Veda is preserved are to be constructed, cataloguing its slightest irregularities of form, and endeavoring to fix its readings beyond the reach of question or change. Four such treatises have come to light: one belonging to the Rig-Veda, one to the White Yajus or Vâjasaneyi-Saṁhitâ, one to the Black Yajus or Tâittirîya-Saṁhitâ, and one to the Atharva-Veda; for the Sâma-Veda alone none has yet been found.

* *Ein erster Versuch über den Accent im Sanskrit*, von Otto Böhtlingk, in the *Memoirs of the St. Petersburg Academy*, vol. vii., series 6th, 4to.

Prior to the publication of any of them, the teachings of the first three with regard to accent were summarily presented by Roth (who was the first to call the attention of scholars to this class of works) in the Introduction to his edition of Yâska's *Nirukta* (Göttingen, 1852, pp. lvii.—lxxii.). All have been since edited in full; the *Rik-Prâtiçâkhya* by Regnier (in the *Journal Asiatique*, Paris, 1857–9) and Müller (Leipzig, 1856–69), the *Vâjasaneyi-Prâtiçâkhya* by Weber (in his *Indische Studien*, vol. iv., Berlin, 1858), the *Atharva-Prâtiçâkhya* and the *Tâitirîya-Prâtiçâkhya* by myself (in the *Journal of the American Oriental Society*, vols. vii., 1862, and ix., 1871). I have also discussed—with more fullness, I believe, than any one else has found occasion to do—some of the general questions relating to the subject, in a critique on Bopp's *Accentuationssystem*, in the *Journ. Am. Or. Soc.* (vol. v., 1856, pp. 195–218), and in the note to *Ath. Prât.* iii. 65 (*Journ. etc.* vii. 494 ff.); and have set forth the rules respecting the accent of the verb in the sentence, with illustrations from the *Atharva-Veda*, in the same *Journal* (v. 387 ff.).

The information which we derive from all these enumerated sources is full enough, not only to let us see clearly the views held by the ancient Hindu grammarians (their age, unfortunately, is not ascertained, but is generally believed to precede by some centuries the Christian era) respecting the accent of their learned and sacred language, but also to enable us in some measure to trace the development of their accentual theory, and to criticize it in its details. For, though we cannot help admiring and respecting, and in a very high degree, the acuteness and sagacity of those oldest known students of phonetics, we cannot accept for truth what they give us without first carefully questioning it, and testing it by fact and by theory; and we shall be likely to find in their treatment of more than one point their characteristic and national weaknesses, and to be led to modify and amend their doctrines.

The general name given to accent is *svara*, which means literally 'tone;' and, in virtue of this meaning, is applied also to designate other things beside accent. Thus, it is the name of a 'vowel,' as being a *tone*-sound, an utterance in which the

element of tone predominates over that of articulation ; and it is in the Prâtiçâkhyas used a dozen times in this sense to once in any or all others. It designates, moreover, the ‘tones’ or musical notes which compose the scale. There is, then, nothing about the word that necessarily implies a particular theory respecting the nature of accent ; although the absence of any reference in it to stress or force of utterance, and its connection with musical pitch, are distinctly suggestive of a musical theory.

This suggestion is made a certainty by the names and definitions of the separate accents or “tones.” Of these, three are recognized, and they are called respectively *udâtta*, *anudâtta*, and *svarita*.

Udâtta (passive participle of the root *dâ*, with the prepositions *ut* and *â*) means literally ‘taken up, raised, elevated.’ And the description of the accent by all the authorities corresponds with this title ; it is defined everywhere, in nearly identical terms, as being utterance *uccâis*, ‘in a high tone.’ (So Ath. Prât. i. 14 ; Vâj. Prât. i. 108 ; Tâitt. Prât. i. 38 ; Pân. i. 2. 29 ; the Rik Prât. alone, iii. 1, is less explicit, but its whole doctrine accords with that of the rest.)

Anudâtta is the same word with the negative prefix, and so means ‘not elevated.’ The authorities define it as signifying utterance *nîcâis*, ‘in a low tone.’ (See Ath. Prât. i. 15 ; Vâj. Prât. i. 109 ; Tâitt. Prât. i. 39 ; Pân. i. 2. 30 ; the Rik Prât. defines *udâtta* and *anudâtta* as characterized respectively by “tension” and “relaxation” — i. e. of the organs of articulation.) This lowness of tone does not imply, of course, a fall from the ordinary pitch of voice ; the tone is low as compared with *udâtta* ; it is the simple negation of that uplifting of pitch which marks the positively accented syllable.

The name of the third tone is *svarita*, and it is uniformly explained as consisting in a combination of the other two. Thus, Pânini and the Tâittirîya-Prâtiçâkhya say, in identical phrase, *samâhâraḥ svaritaḥ*, ‘the combination [of the two others, just defined] is *svarita* ;’ the Vâjasaneyi-Prâtiçâkhya has *ubhayavân svaritaḥ*, ‘one [i. e. a vowel] possessing both [the two tones as already defined] is *svarita* ;’ the Rik-Prâtiçâkhya

is more elaborate in its statement: "in case of the occurrence together of the two preceding [tones] in one syllable, the accent is *svārīta*;" the Atharva-Prātiśākhya alone is here ambiguous, using a term (*ākshiptam*) which is not explanatory, but itself requires to be explained in accordance with what we know by other means of the theory involved. The further specifications added in nearly all the treatises make this definition still more unequivocal. Thus, Pāṇini (i. 2. 32) says, "half [the quantity of] a short vowel at its beginning is *udātta*;" the Ath. Prāt. (i. 17), "half the quantity of a *svārīta*, at its beginning, is *udātta*;" the Vāj. Prāt. (i. 126), "at its beginning, half the quantity of the vowel is *udātta*." The other two Prātiśākhyas complicate the definition with a further development of the accentual theory, to be explained hereafter; but in regard to the essential characteristic of the accent, that it is a union of higher and lower tone in the same syllable, they accord entirely with those already quoted. The Rik Prāt. (iii. 2, 3) says "half a mora, or half the quantity, of this [*svārīta*] is higher than *udātta*; the following remainder is *anudātta*, but is heard as *udātta*"—that is to say, the descent of tone, instead of being from *udātta* to *anudātta*, is from a higher pitch than *udātta* down to something sensibly equivalent to the latter. And the Tāitt. Prāt. (one of whose peculiarities it is everywhere to quote conflicting opinions on controverted points) says, yet more at large (i. 41-7): "of this *svārīta*, when it immediately follows an *udātta*, the beginning, to the extent of half a short vowel, is uttered in a higher tone than *udātta*; the remainder is equivalent to *udātta*; or, this following part is in a lower tone; or it is equivalent to *anudātta*; the teachers say that the first part is equivalent to *udātta* and the rest to *anudātta*; some hold that the whole is a downward slide."

We thus see that there is no discordance whatever among the ancient Hindu grammarians with regard to the nature of the *svārīta* accent, as being the union of a higher and lower tone upon the same vowel, or within the same syllable. No hint of a different explanation is given us, nor do we discover any traces of the former prevalence of another view, crowded

out and replaced by this. Of the name *svarita*, however, by which it is called, it is exceedingly difficult to find a satisfactory explanation. The word is most likely a quasi-participial formation from *svara* itself, and means 'toned;' possibly it was applied to the syllable because this exhibited all the tones which have to be taken account of in accentuation; or because the element of tone was most conspicuous in it; its change of pitch gave it a sing-song or cadenced effect. That it signifies 'accented,' in our sense of that term, there is no reason whatever for supposing. Other conjectural explanations, of which not a few have been ventured, may be left here unnoticed. What is unmistakably clear with regard to it is the view which the Hindus unanimously held as to the nature of the accent which it designated; and any interpretation which we may try to put upon it must be subordinated to this; we have no right to make an etymology of the name, and then force it into a definition of the thing.

Such being the defined character of the three tones, their accordance with the Greek acute, grave, and circumflex, as defined above, in Prof. Hadley's paper, is clear and undeniable; and the accentual system either of the Greek or the Sanskrit, if it needed any support from without, would find it abundantly in this close parallelism with the other. There being no possibility of a copying of the accentual theory on either side, both must be regarded as independently founded upon the facts of the two languages, and as faithfully and fairly representing them. And we are justified in setting aside, when speaking of the Sanskrit accents, the outlandish Sanskrit terms, and employing instead of them the familiar designations "acute," "grave," "circumflex."*

Unless, indeed, we shall find sufficient evidence somewhere in the phenomena of accentuation of either Greek or Sanskrit to convict the native grammarians of having blundered in their observations and deductions. And that this is not the

* These were used by Böhlingk, in the essay which first opened to Europe the knowledge of the Sanskrit accent; and the more the latter is understood, the more generally will they be adopted.

case as regards the Sanskrit, I shall endeavor to show by a concise exhibition of the rules for the occurrence of the *svārila* or circumflex in that language.

The circumflex in Sanskrit is a rare and inconspicuous phenomenon as compared with the Greek. Only a very small class of words have it as their proper accent, and it arises chiefly in the course of the combination of words into phrases, by the peculiar euphonic system of the Sanskrit, which, as is well known, does not leave its words to stand independently side by side, but adapts their final and initial elements to one another, avoiding the hiatus, or any collision of incompatible consonants.

The first class of circumflexes arises when an acute *i* or *î*, or *u*, is converted into *y* or *v* before an unaccented dissimilar vowel. Thus, *vî* and *evā* are combined into *vyèvā**; *nadî'* and *asya* into *nadyāśya*; *apsû* and *agne* into *apsvāgne*. That is to say, the single syllable into which the higher and lower tone are combined still retains the double pitch belonging to its constituent parts. This kind of circumflex is in all the Prâtiçâkhyas† styled *kshâipra*, literally 'hasty, quick,' as being accompanied with an abbreviation of quantity, in the contraction of two syllables into one.

One of the most peculiar and problematical processes in the whole Sanskrit euphonic system is that by which a final *ê* or *ô* absorbs or elides an initial *ā* of the word that follows. This, which has become the regular and necessary mode of combination in the later or classical Sanskrit, was only an occasional license in the older Vedic language; in the Atharva-Veda, for instance, the *a* was elided in only a little more than one-sixth of the cases in which it followed *e* or *o*. Wherever, now, the *e* or *o* was acute and the *a* grave, the accent of the former after the absorption of the latter was made circumflex. Thus, *té abравan* became *tèbravan*; *só abравît* became *sòbravît*.

* For want of means to do better, I signify the circumflex accent by what we ordinarily call the sign of grave; the sound represented (in accordance with usual custom) by *v* is that of our *w*.

† The distinction, namely, of the kinds of circumflex, with the corresponding nomenclature, is unknown to Pāṇini.

Here, again, the acute and grave tones of the constituent elements are both represented in the circumflex given to the syllable that results from their combination. This second circumflex is styled *abhinihata* (or, by the Tâitt. Prât., *abhinihata*): the literal meaning and ground of application of the term are not very clear.

In case, however, the accent of the two elements is other than has been defined, no circumflex arises; if the second element is acute, the combination is acute; if the first as well as the second is grave, the combination, of course, is grave also.

If, moreover, two vowels are fused together into a single vowel or diphthong, then, if either was acute, the resulting combination, as a general rule, is also acute: that is to say, the acute element is powerful enough to assimilate the other, raising the whole syllable to the higher tone. Thus, *sá'* and *asti* become *sá'sti*, *sá'* and *eshá'* become *sá'ishá'*, *sá'* and *út* become *sót*; *nayati* and *índrah* become *nayati'ndrah*; *stha ú'rjam* becomes *sthórjam*; and so on. This is the rule laid down in all the Prâtiçâkhyas; and all the Vedic texts of the first rank, the Saṁhitâs, conform to it. Pâṇini, however (at viii. 2. 6), also permits the result of combination of a final acute with an initial grave to be circumflex; that is, he allows *sá' asti* to become either *sá'sti* or *sá'sti*, and so on. And there is a single Vedic text of the second order (the Çatapatha-Brâhmaṇa, belonging to the White Yajur-Veda) which makes its combinations in this manner circumflex. Of course, this is just the exception which we might expect to see made, considering the nature of the circumflex; and that it is not universally recognized in Sanskrit usage indicates the very different position which the circumflex takes in the Sanskrit system, as compared with the Greek: the latter language has a predilection for it, and lets it appear in innumerable cases where it has no etymological justification; the former has a prejudice against it, and exhibits it only where compelled, as it were, to do so.

But there is one exceptional and infrequent case where the Prâtiçâkhyas require, and Vedic usage shows, a circumflex as result of the fusion of an acute vowel with a grave into one.

It is where two short *i*'s are combined, forming long *î*. Thus, *divi iva* becomes *divîva*, *abhî ihi* becomes *abhîhi*, and so on. This appears very arbitrary, as we can see no reason why *î* under such circumstances should receive a circumflex accent any more than *â*, or *û*, or the diphthongs *e*, *âi*, *o*, *âu*. And the impression of arbitrariness is increased when we come to notice that one Prâtiçâkhya (the Tâitt. Prât., at x. 17) denies the circumflex to *î*, but gives it to *û*, combining *mâsû ut* into *mâsût*, and so on. This is equivalent to restricting still further the occurrence of the circumflex in question: there are no more than sixteen cases of *î* in the whole ample text of the Atharva-Veda; but there are only five of *û* in the yet ampler Tâittirîya-Sanhitâ (which contains about thirty passages in which *î* would appear, if the usage of the text permitted). This rare and anomalous circumflex is styled *praçlishṭa* (or *prâçlishṭa*), 'resulting from fusion.'

Such, then, are the cases in which a circumflex arises by the combination into one syllable of a preceding acute and a following grave element. Besides these, there is a limited class of words which show a circumflex as their proper and sole accent: for example, the nouns *svâr*, 'heaven,' and *kanyâ*, 'girl,' the particle *kvâ*, 'where?', the adjective *budhnyâ*, 'fundamental,' and so on. But every word of this class contains a *y* or *v* before the vowel of its accented syllable; that is to say, the syllable is of the same kind with those which in combination receive the *kshâipra* circumflex; and it is obvious that the circumflex is indeed essentially a *kshâipra*, its origin lying merely a step further back. By this I mean, that *kanyâ* and *kvâ*, for example, stand for more original *kanî-â* and *kû-a*, so that the circumflex of *kanyâ* is precisely analogous with that of *nadyâsya* from *nadî asya*. And the Vedic verse clearly shows that the fusion of the two syllables into one, with consequent circumflex, is a fact not yet accomplished in Vedic times: such syllables are more often to be read as two than as one, *kvâ* becoming dissyllabic, *kanyâ* trisyllabic, and so on. Indeed, the Tâittirîya-Sanhitâ (which has a peculiar orthographic usage with regard to a part of these words) regularly writes *sûvar* instead of *svâr*, *budhnîya* instead of *budhnyâ*, and

so on — while, on the other hand, it resolves *indrāgnyós* into *indrāgnyíós*, *bāhvós* into *bāhuvós*, and so in other like cases.

To the circumflex accent which thus appears as the original accent of a word, and does not arise in the course of the euphonic combination of words into phrases, most of the Hindu grammarians give the name of *jātya*, 'native, natural;' the Tāitt. Prât. alone calls it *nitya*, 'constant, unchanging.' We may class the cases of its occurrence under four heads:

a. Words like *svār* and *kvā*, of which the derivation is obscure or without extended analogies.

b. Words having the circumflexed suffix *yā* (representing *ī-a* or *ī'-a*), like *kanyā'*, *vīryā*, *dhanvanyā*, *samsrāvya*: this class is a pretty large one.

c. Forms of declension made by adding an unaccented case-ending to an accented final *ī* or *ū*: thus, *svādhyās* from *svādhi'*; *lalāmyām* from *lalāmī'*; *tanvās*, *tanvām*, *tanvè* from *tanū'* (these last are especially frequent; the Tāittirīya-Saṁhitā writes them *tanūvas*, *tanūve*, etc.), *prḍākvās* from *prḍakū'*. These are mostly nominatives singular dual or plural, or accusatives singular or dual, since the endings of all the cases except these five tend to draw the accent forward upon themselves; and so we have, for example, from *nadī'*, the nom. dual *nadyāu* and nom. pl. *nadyās*, but in other oblique cases *nadyā'i*, *nadyā's*, etc., just as we have from *nā'us* the nominatives *nāvāu* and *nā'vas*, but the oblique cases *nāvé*, *nāvās*, *nāvī*, etc.

d. Accented vocatives, like *dyā'us*, *jyā'ke*. It is the rule, namely, in Sanskrit, that the vocative, if accented at all, is accented on its first syllable. If, now, this syllable, as written, is one of which a semivowel preceding the vowel has in the metre the value of a syllable by itself, that element alone takes the acute tone, and the written syllable is circumflexed. The words given above, therefore, are equivalent to *dī-āus*, *jī-āke*, and have to be so read in scanning the verses in which they occur. The case is quite a rare one; it occurs, I believe, only twice in the Atharva-Veda (at i. 2.2 and vi. 4.3: but in the latter passage the edited text reads incorrectly *dyā'us*),

and I presume there are hardly more than that number of cases in the Rig-Veda.

To illustrate the degree of frequency of the circumflex accent in actual use, in its different kinds, it may be stated that in the first twenty hymns of the Rig-Veda (about two hundred lines, mostly of twenty-four syllables each; a part, of thirty-two), there are but ten cases of it, namely six *kshâipra*, one *abhinihita*, and three *jâtya*; of which last, there is one case each falling under *a*, *b*, and *c*. In the first *praçna* or chapter of the Tâittirîya-Sanhitâ, again (a somewhat less body of text, chiefly prose), there are six *kshâipra*'s, eleven *abhinihita*'s, and three *jâtya*'s (all falling under *b*). In the first book of the Atharva-Veda (having about the same extent as the passage from the Rig-Veda already reported), once more, there are forty-six cases; eleven *kshâipra*'s, three *abhinihita*'s, and thirty-two *jâtya*'s; of which last, ten fall under *b*, twenty-one under *c*, and one under *d*.

The diversity thus appearing between the different passages compared is in part accidental, in part characteristic of the texts from which they are respectively taken: in general, it will probably be found that the *kshâipra* circumflex appears oftenest, and the *jâtya*, its nearest kindred, next; the *praçlisha*, as already explained, is by far the rarest of the four.

So far, there is nothing difficult or questionable either in the theory or in the practice of Sanskrit accentuation, and all the phenomena are of a nature to favor and establish the truth of that description of the nature of the *svârîta* or circumflex accent which is given by the grammarians. But we have next to consider an addition to the theory which is of a very problematical character. The native authorities, namely, teach unanimously that a syllable naturally grave, if it follows an acute, in any part of a word, or in a succeeding word in the same phrase, takes the circumflex tone. Thus, the Rik-Prâtîçâkhya, which makes the fullest statement, says (iii. 9) "a grave syllable preceded by an acute is circumflexed, whether separated from it by a hiatus or by a consonant;" and the others teach virtually the same thing.* That is to say (as

* See Vaj. Prât. iv. 134, Tâitt. Prât. xiv. 29, 30, Ath. Prât. iii. 67, Pân. viii. 4. 66.

we may state to ourselves the virtual meaning of the doctrine), the voice, when once raised to the higher pitch of acute, is not able to descend to the general level of utterance in the interval between the acute syllable and its successor, but slides down in the course of the latter; it occupies a syllable in its descent. Thus, *īti* is not grave, but circumflex, on its final; *sā'* and *asya* become *sā'sya* with circumflex on the last *a*; the *bru* of the toneless *bruvanti* is circumflexed in the combination *té bruvanti*, and so on. This circumflex, by European grammarians, is conveniently distinguished from those which have been described above by being called the "dependent" or the "enclitic" circumflex: the term, however, has no correspondent in Sanskrit, nor do the Hindu grammarians, by description, classification, or designation, intimate a recognition of any difference in character between the enclitic and the independent varieties of this accent. The Prātiçākhyas divide the former, as they do the latter, into sub-varieties, calling *tāiro-vyañjana*, 'having consonants interposed,' a circumflex vowel between which and the occasioning acute consonants intervene (as in the examples above cited), and *pādavṛtta*, 'with word-hiatus' (or, in the Rik Prāt., simply *vāivṛtta*, 'with hiatus'), one that is separated from the acute by the hiatus that sometimes intervenes between two words (as in the *u* of *yā' u ca*, from *yā'h u ca*, and of *tā ucyante*, from *té ucyante**). No attempt is made to describe these two varieties as exhibiting

* There are unimportant differences among the different Prātiçākhyas in regard to the classification of the enclitic circumflexes. The Vāj. Prāt. (i. 118) makes a special class, *tāirovirāma*, 'with intervening pause,' of those which are separated from the occasioning acute by the pause which in *pada*-text divides the two parts of a compound word: thus, *gō patā'i* or *yajñā patim* has this kind of circumflex on *pa*; and it is probable that the Tāitt. Prāt. (xx. 3) intends to designate the same as *prātihata*, though the native commentary understands the case otherwise, and makes *prātihata* signify a circumflex standing in another word than the acute and separated from it by consonants, like the *ā* of *yās tvā*, or the *u* of *té bruvanti*, as given above. The Tāitt. Prāt. further confines the name *pādavṛtta* to cases involving a hiatus between two independent words, and in the exceedingly rare cases where there is a hiatus within the word itself (as in *prāṅgam*), classes the circumflex as *tā'rovyañjana*, though there is no 'intervention of consonants' at all here. And the Vāj. Prāt. (i. 120) has a peculiar name, *tāthābhārya*, for the very uncommon and somewhat anomalous case of an enclitic circumflex between two acutes.

any difference of character, and their distinction is evidently only an example of that tendency to over-refinement in classification which is characteristic of Hindu systematists.

It is not possible to accept the teachings of the Sanskrit grammarians as to the enclitic circumflex with the same trust as those respecting the independent circumflex. Even the Greek, which shows a marked predilection for the circumflexed tone, never admits it save in an actually long vowel, not finding room elsewhere for the exhibition of the double tone or downward slide. And the Sanskrit, as we have seen, has so much less inclination to this tone, or capacity for it, as to admit it only in very rare cases even upon a long vowel or a proper diphthong: to bring it out, there is needed an improper diphthong, as we may fairly call it—a vowel-group in which the first element is an *i* or *u* sound, written as a *y* or *v*, but still evidently retaining in good measure its vowel value and its capacity of tone. In a language of this habit, then, it is next to incredible that we should find a circumflex tone developed with the utmost freedom even in short vowels (as the finals of *ūti* and *mādhu*) by the simple neighborhood of an acute. We cannot, so it seems to me, avoid suspecting the accuracy of the observations which underlie the whole theory of the enclitic circumflex. The Tâittirîya-Prâtiçâkhya is ingenuous enough to inform us (xiv. 33) that some authorities denied this circumflex *in toto*. If we do not carry our own skepticism so far as that, we shall be likely to take refuge in the theory of a “middle tone,” like that assumed by Misteli and Hadley (see the preceding article, p. 11.) in explaining the peculiarities of Greek and Latin accent. This would imply that the enclitic tone which was perceived to lead down from acute pitch to grave was in reality a step intermediate between the two, and was hastily and inaccurately apprehended by the Hindu grammarians as a combination of the two, or a slide, and so identified with the independent circumflex, of which the origin and character were too clear to admit of any doubt or question. Through this modification of the Hindu theory, we may win from the Sanskrit enclitic circumflex a degree of support for the “middle tone;” but it is necessary

that we understand and confess the fact of the modification. Quietly to assume, as Misteli does, that the whole Sanskrit circumflex, in both its independent and its enclitic varieties, is only a middle tone, is wholly unallowable, being opposed to the plain and unanimous statements of the Hindu grammarians, and, not less, to the teachings of a sound accentual theory.*

A single exception is made by all the Hindu text-books to the rule that a grave syllable following an acute takes the enclitic circumflex: if, namely, an acute or a circumflex (of course, independent) immediately follows, the grave retains its proper quality. Thus, in *yé ca*, *ca* is circumflexed; but in *yé ca té* or *yé ca svar* it is grave (Rik Prât. iii. 9, Vâj. Prât. iv. 135, Tâitt. Prât. xiv. 31, Ath. Prât. iii. 70, Pân. viii. 4. 67). The Tâittirîya-Prâtichâkhyâ (xiv. 32) reports a single grammarian (Âgniveçyâyana) as disallowing this exception, and maintaining the circumflex even before a syllable having or beginning with high tone; and Pânini (viii. 4. 67) mentions three authorities (Gârgya, Kâçyapa, and Gâlava) as holding the same doctrine. I do not see that theoretical considerations teach us anything with definiteness upon this point; we should quite as naturally, however, in my opinion, expect the enclitic tone, whether slide or middle tone, to maintain itself before an acute or circumflex as well as before a grave.

These are the principal features of the system of Sanskrit accentuation. We need, however, to follow it out into one or two further details, important as regards the native theory; and, before we can do this, we must take note of the Hindu

* It would almost seem that Misteli's view was to be looked upon as the Italian one, since Ascoli also, in his lately published lectures on comparative philology (*Corsi di Glottologia* etc., first part, Comparative Phonology of the Sanskrit, Greek, and Latin, p. 15), expresses himself upon the subject as follows: "The syllable, finally, that follows the acute, becomes *svârîta*, 'tonic,' or, in other terms, assumes the *svârîta* accent—which some European grammarians (infelicitously, as it appears to me) have called 'circumflex'—; that is to say, it has a tonality higher than the ordinary, but not so high as is that of the syllable with acute." A scholar of Ascoli's rank and claims to respect should not allow himself thus summarily to set aside the carefully deduced results of his predecessors, without bringing up a single consideration to support the view he takes.

mode of designating accent. This is in the main the same in all the accentuated texts: some minor differences will appear as we go on; others may be passed over as of no importance to our purpose.*

By a striking — and as I think, an ill-judged and unfortunate — peculiarity of usage, the Hindu does not designate directly the really accented or acute syllable, but, instead, its surroundings, or the preceding grave and the following circumflex. Or, as we may express it, the acute syllable is left unmarked; but the grave syllable is marked, by a horizontal stroke beneath the syllable; and the circumflex (whether enclitic or independent), by a perpendicular stroke above. In the manuscripts (so far as I know, without exception), these strokes are added in red ink; in printed text, of course, they have to be represented by black lines.

Thus, examples of single words (with transliteration, accented according to our method, written below each word) are

1. अग्निना । कर्ष्यसि । चोदयित्रीभिः ।
a-gní-ná ka-ri-shyá-si co-da-yi-trí'-bhīh

An independent circumflex is generally to be distinguished from an enclitic (of which latter kind are those in the above examples) by having no unmarked acute before it: thus

2. स्वः । कन्या । यातुधान्यः ।
svàh ka-nyá yá-tu-dhá-nyàh

A word that is unaccented has the mark of grave under every syllable; an acute monosyllable has no mark at all; and an initial acute has, of course, no grave mark before it, nor a final acute any circumflex mark after it: thus

3. च । वक्षति । सः । पोषम् । अग्निम् । सुहृत्पुत्रम् ।
ca va-ksha-ti sáh pó-sham a-gní'm su-rú-pa-kr-tnú'm

We may conjecture plausibly enough that these marks are symbolical: the horizontal line below intimates the lower tone

* The designation of the independent circumflex in the White Yajur Veda is in sundry points peculiar; see Weber's edition, Preface, p. x.

at which the voice moves on; the other directs the voice downward from a higher key.

This mode of accentuation would seem to involve an excessive repetition of the sign of grave tone; but the difficulty is avoided (as we may provisionally say) by omitting all signs of grave after a circumflex except under a syllable that precedes another acute or an independent circumflex. In this way, there is no repetition of the grave sign under successive syllables except at the beginning of a word or phrase, before the first accented syllable is reached. Thus,

4. कृतारम् । रत्नधातमम् । चित्रश्रवस्तमः ।

hó-tá-ram ra-tna-dhā'-ta-mam ci-trá-śra-va-sta-mah

The same rule is followed, of course, where words are combined into phrases; and

5. अग्ने । यम् । यज्ञम् । अध्वरम् । विश्वतः । परिभूः । असि ।

á-gne yám ya-jñám a-dhva-rám vi-śvá-taḥ pa-ri-bhūḥ á-si

becomes, as a sentence,

6. अग्ने यं यज्ञमध्वरं विश्वतः परिभूरसि ।

In this phrase, it is to be noted, the *e* of *ágne*, which was enclitically circumflex when the word stood alone, becomes grave again (by the rule stated above, p. 33) when the acute syllable *yám* comes to stand after it: and, on the other hand, the grave initial *a* of *adhvarám* takes the enclitic circumflex when conjoined with the acute final of *yajñám*. The penultimate and antepenultimate syllables of the line, as both alike standing between grave and circumflex signs, are both acute, the voice when once sent up by the former sign remaining raised until sent down again by the latter. In the same manner, when conducted down by the circumflex sign, it continues at the lower pitch till the other directs it to go up: an example illustrating more fully this effect is

7. ओमासश्चर्षणीधृतो विश्वे देवासु आ गत ।

ómāsaḥ carṣaṇīdhṛto víṣve devāsa á' gata

where the first four words are vocatives, and the last a

finite verb in an independent clause—both of which classes of words are toneless in Sanskrit, except when, like the first and third words, they stand at the head of a sentence or of a primary division of a verse.

I will note here but one other peculiarity of the mode of designation: namely, that if an independent circumflex follows an acute, it is in no way distinguished from an enclitic circumflex; so that, for example, in

८. ताः स्वरवतीः

it is impossible to tell whether the latter word is a toneless vocative, *svarvatîh*, or a nominative or accusative with its regular accent, *svârvatîh*.

It thus appears that two classes of syllables in accentuated text are left unmarked: first, those which are properly acute or *udâtta* (as *ô*-, *vîç*-, and *â'*, in the last example but one); and second, those which are properly grave or *anudâtta*, but which neither receive the enclitic circumflex as following an acute, nor are marked by the grave sign, as preceding an acute or circumflex. But there is a strange and perplexing addition to the Hindu theory which virtually identifies these two classes with one another in respect to tone: and this we have next to examine.

The point is thus stated in the Tâitirîya-Prâtiçâkhya (xxi. 10, 11): “in continuous text, after a circumflex, a series (*pracaya*) of grave syllables has the tone of acute (literally, ‘sounds, or is heard, as acute’), except the syllable that is followed by an acute or circumflex.” The other Prâtiçâkhyas have equivalent rules (Rik Prât. iii. 5, 11, 12; Vâj. Prât. iv. 138-40; Ath. Prât. iii. 71, 74).*

*The Vâj. Prât., in describing the character of the accent, uses the term *udâttaṃaya*, ‘made of, or of the same material as, acute,’ instead of (like the rest) *udâttaçruti*, ‘having the audible quality of acute.’ The Rik Prât. states the rule twice over, calling the tone once (in verse 11) *udâttaçruti*, and once (in verse 5) *udâtta*, ‘acute,’ outright; it also adds one or two peculiar items, the first to the effect that “some, however, depress (to grave tone) one syllable, or more than one, at the end of the series; or even all but one or two;” the other (verse 13) is too obscure to be made intelligible without more exposition and discussion than we have room for here.

To this accent is given the name *pracaya*, 'accumulation, indefinite series,' or *pracita*, 'accumulated, indefinitely continued,' from the way in which it is liable to run on, to the extent, sometimes, of ten or a dozen syllables, or more.*

According to the Prâtiçâkhyas, then, the treatment in continuous text of syllables naturally grave is as follows: a single such syllable following an acute before a pause becomes an enclitic circumflex, but before another acute or circumflex retains its grave character (compare *agne*, above, illustrations 5 and 6); of two such syllables, the first always has the circumflex, the second is either grave before another accented syllable (as *-dhva-* in illustration 6), or *pracaya*, with acute tone, before a pause (as the finals in the last two words in 4 and the last in 7); of more than two, either all but the first and last, or all but the first, are *pracaya* (as *-saç carshañîdhr-* and *devâ-* in 7, or *-vastamaḥ* in 4); — after a circumflex, the treatment is the same, with the exception that the first syllable is not circumflexed, but remains grave or becomes *pracaya*, according to the character of what follows it; — finally, any number of grave syllables coming before the first acute or circumflex in a phrase retain their grave character.

The striking result of this is, that there comes to be a complete accordance between the theoretical tone of each syllable and the way it is marked. Every syllable that has the perpendicular stroke above it is circumflex, and of the same tone, whether the circumflex is independent or enclitic; every syllable that has a horizontal mark beneath is grave, or of low tone; every syllable that has no mark at all is of high tone, whether it be properly acute, or originally grave and converted to *pracaya*.

An interesting and important question now arises: What is the ground of this complete accordance? Is the mode of designation posterior to the theory? Did the Hindus leave the *pracaya* grave syllables unmarked, like acute, *because*

* For example, in the series of toneless vocatives *agne dudhra gahya kimṣîla vanya*.

they gave them the tone of acute, so that their identity of treatment is due to a perceived identity of character? or, on the other hand, was the omission of a part of the marks indicating grave tone made for the sake of convenience, of brevity (as I have, provisionally, assumed above to be the case), and is the theory an afterthought, suggested by the identity of designation, and aiming to establish a corresponding identity of character?

To many scholars, perhaps even to nearly all, the question I have raised will seem strange, and the latter of the two suggested explanations one altogether to be rejected, as implausible and incredible. Nevertheless, I am convinced that the matter merits a serious discussion. And, in the first place, we shall not, I think, be doing the ancient Hindu grammarians an utter injustice, in supposing them capable of fabricating a theory like that of the *pracaya*-accent, under the inducement stated above. The "schools" of Vedic study in which the Prâtiçâkhyas originated were far removed from the period in which their sacred texts had grown up, or even had been brought into their present shape; and these texts had begun to be treated in more than one respect in a somewhat formal, arbitrary, and unintelligent manner. The acuteness of observation, and the skill in combination and systematization, displayed by the grammarians, as by the Hindu workers in other departments of science, are worthy of high admiration: but we cannot equally commend their moderation, nor is their soundness to be trusted to the end. They never knew where to stop; and their systems, as has been said elsewhere, always tended to take on a prescriptive character where they were intended to be descriptive only — putting violence upon the facts which they set out simply to examine and classify. I should not be restrained from regarding the *pracaya*-accent with acute tone as a later and artificial addition to the original accentual theory by any exaggerated faith in the infallibility of the authorities who report it to us.

A single scholar, of high rank, and especially conversant with the Prâtiçâkhyas,* has, it is, true, maintained that the

* M. Müller, in his History of Ancient Sanskrit Literature, p. 497ff.

Prâtiçâkhyas antedate the use of writing in India, and do not presuppose any recorded text at all. But, if I am not mistaken, this view of his is generally rejected as paradoxical. The Prâtiçâkhyas do, indeed, like most of the sacred literature of India, and some of its literature in other departments, studiously and successfully ignore everything written, and acknowledge only the oral tradition of the schools as the lawful channel for the conveyance of knowledge from generation to generation; but, in the view of most men, such phonetic analysis as they make, and such fixation of the nicest details of reading as they imply, would be more than wonderful, it would be absolutely miraculous, without the aid of writing. A race that had made advanced and recondite studies in every department of grammar without even possessing an alphabet would be a greater prodigy than "the Anthropophagi, and men whose heads do grow beneath their shoulders."

The obstacle in the way of our accepting the doctrine of the *pracaya*-accent is the seeming impossibility of working it in as a part of the general accentual system, such as this has been described above. The acute is a syllable which is accented or rendered conspicuous by being lifted above the lower or grave tone of utterance: but what does this distinction amount to, if the grave syllables also are to be raised, even in masses, to the same level? What a strange grave tone is that which can only maintain itself by the help of an immediately following acute! What are we to think of the independent circumflex, made by the combination of an acute and a grave element, when the grave syllable, even without the encouragement of an acute joined with it, can hardly be held down at grave pitch, but is constantly rising to the higher plane of utterance? Yet worse, what sort of an enclitic accent is that which leads down the voice from acute pitch no-whither, since, the moment the transition is past, the voice leaps back again to acute?

The last of these difficulties, and the most insurmountable of them, seems to have been felt by the Hindu theorizers themselves, who have made a very curious attempt to avoid it: namely, by shifting the circumflex itself to a higher plane.

Thus, the Rik Prâtiçâkhya says (iii. 2, 3) “of this [circumflex], a half-mora, or the moiety, is more acute than acute; the following remainder is grave, but sounds like acute” (literally, ‘is *udâttaçruti*,’ which is the same term that is used in describing the *pracaya*). That is to say, the circumflex begins higher than acute, and descends only to acute pitch, thus conducting the voice to the level at which it then runs on in *pracaya*. And the Tâittirîya-Prâtiçâkhya (i. 41, 42, 44, 45) declares “of this [circumflex], when it follows an acute, the beginning, to the extent of half a short vowel, is higher than acute; the remainder is the same with acute; or the remaining part is still lower; or it is the same with grave.” Of these rules, the first two state the theory squarely; the others appear to express the scruples of those who are struck by its inconsistency with the fundamental principle, that circumflex is the combination of acute and grave within the same syllable. The remaining two Prâtiçâkhyas take no notice of any such modification of the nature of the circumflex. And, we may say, with very good reason; for nothing is really gained by it. On the contrary, it would be no less strange that the enclitic accent, the transition step from an acute to a following grave, should rise a grade above acute, and come down to acute itself, than that the grave to which it led should spring to the height of its first element. And, according to the Rik form of the theory, we should have the independent circumflex, arising out of the union of an acute and a grave element, and having no existence except as the result of such union, lifted up in all or nearly all its substance above acute pitch; while, in the Tâittirîya form, whether it were so lifted or not would depend upon the accidental circumstance whether it were preceded by an acute or a grave syllable. There would be no sense in our assuming that even an independent circumflex after an acute might be raised in pitch for the sake of clearer distinction from that acute; for it is sufficiently distinguished by its sliding tone; and, if it had any right to be further distinguished, an acute following an acute would have much more right; while, nevertheless, any number of acutes are

allowed to succeed one another, without modification of their natural character.

To my own mind, I must acknowledge, the difficulties that encompass the Hindu theory of a *pracaya* accent, giving to grave syllables the tone of acute, are more numerous and formidable than those involved in its rejection. If there be found any one, skillful enough to smooth these difficulties away, or to devise an explanation of the setting up of the theory other than that which I have suggested, no one will rejoice in his success more than I shall. But for the present, I shall discredit the existence of a fourth or *pracaya* accent, and shall hold it to be at least probable that this was fabricated merely in order to establish an identity of character in those syllables which, according to the current method of accentuation, agreed in their mode of designation—or rather, in being alike undesignated.

In what has been said of the *pracaya*, regard has been had only to the teachings of the Prâtiçâkhyas, since they alone distinctly recognize and name this accent. But in Pâṇini also appears a somewhat kindred doctrine. The great grammarian, namely, has the rules (i. 2. 39, 40) that “grave syllables, following in continuous text a circumflex, are uttered in monotone (*ekaçruti*); but one that is followed by an acute or circumflex is more depressed (*sannatara*, which the commentators explain by *anudâttatara*, ‘more grave,’ i. e. ‘lower than grave’).” Precisely what is intended, now, by *ekaçruti*, ‘monotone,’ is less clear than were to be desired. It is by the commentators defined to mean, ‘without distinction of acute, grave, and circumflex’; but, if it signified only this, there would seem to be no good reason for declaring it to belong to a series of grave syllables anywhere; these would of course all be uttered in the same tone, unless there should be given express direction to the contrary. The first mention of *ekaçruti* is a little above (in rule 33) where it is declared to be the tone used “in calling to a person from a distance;” and it is further prescribed in the rules that follow, for certain conjunctures of sacrificial ceremony from which we can infer nothing definite respecting it. But

certainly, in shouting to a distance a raising of the voice would seem to us a natural and almost necessary accompaniment of the obliteration of ordinary distinctions of tone. We have, then, both a negative and a positive reason for suspecting in Pāṇini's *ekaṣṛuti* a peculiar and a higher tone, instead of a mere negation of varied tone; and so for recognizing a nearer relationship between his teaching and the *pracaya*-doctrine of the Prātiçākhyas than appears at first sight. An unequivocal sign of the same relationship is the prescription of a lower tone for the syllable, naturally grave, that precedes an acute or circumflex. Whether this actually means, as is generally assumed, a yet lower tone than grave, or only a lower tone than the heightened monotone of *ekaṣṛuti*, it seems to me an equally unacceptable part of a sound accentual theory. I cannot recognize a positive sinking of the voice as a necessary or natural preparation for its rise to the pitch of acute.

I am not aware that any one has ever undertaken an investigation of the modes of accent usual among the modern languages of India for the purpose of casting light upon the ancient systems, as laid down in the grammatical text-books and exemplified in the Vedic texts. The mode of recitation of the Vedic texts themselves, however, as practiced by the native scholars of the present day, has been carefully observed by an eminent European Sanskritist, Dr. Haug (now of Munich), and reported in the *Journal of the German Oriental Society* (vol. xvii., 1863, pp. 799–802). I quote the most important paragraph:

“The fundamental law of the Vedic accent is a triplicity of tone. In by far the greatest number of cases the voice begins with a strong tone, the low tone, called *anudātta*, rises in *udātta*—which, however, has absolutely no perceptible tone [i. e. stress]—and only reaches its full height and force in the *svarita*, or high tone. The real chief accents are the *anudātta* and *svarita* alone, which are also constantly interchangeable, as is sufficiently shown by a comparison of the *pada* or word-recitation with the continuous or *saṁhitā*-recitation. The *udātta* is only a kind of auxiliary accent, and I could never, with the closest observation of the mode of recitation, perceive

that the syllable having *udâtta* is really an accented syllable.... The *udâtta* is only imperceptibly distinguished from the *pracaya* or entirely accentless syllable."

A very cursory comparison of this description with the teachings of the Prâtiçâkhyas, reported above, will show how far the rules of utterance laid down and followed in the ancient schools of Vedic study are maintained in their modern successors. The identification of the unmarked acute with the unmarked grave, in point of tone and character, is the same now as of old. The distortion of the circumflex, by pushing it up to a higher position in the scale of tones, which had begun to appear in the Prâtiçâkhyâ period, has now become complete. And, partly under the influence of these two causes, there has come about an absolute inversion of the original accentual relations. The effort has been to mark and distinguish by the voice the two tones that were marked and distinguished by writing. And so the old accented syllable, the acute — the central and determining point of the whole system, out of which and in strict subordination to which the others have their being — since it has no written sign, has sunk into insignificance, and become a mere "auxiliary" to the other two, which were fortunate enough to be plainly designated. The influence of the written sign on the theory and practice of the spoken accent here exhibited is an important support to the explanation suggested above of the origin of the so-called *pracaya* accent.

There is one further point in the theory and designation of the Sanskrit accent which it is desirable to consider, in order to make our view of the subject more complete. It is the *kampa* (literally 'trembling, shake, trill'), or the peculiar modification undergone by an independent circumflex when followed by another circumflex or by an acute. This modification consists, according to the Prâtiçâkhyas, simply in a depression of the last portion of the circumflexed syllable to a lower than the ordinary pitch. Its explanation makes a very small figure in the rules of the different treatises. In the Vâj. Prât. (iv. 137) it is so obscurely stated, and in such ambiguous connection, that it would hardly be intelligible, but

for the comparison of the other kindred works, and the light that the written form of the texts throws upon it. In the Rik Prât., also, it appears only as an exception to the definition of the ordinary character of the circumflex: the latter part of the circumflex is grave, but has the tone of acute—"except when an acute or circumflex syllable is spoken immediately after it" (iii. 3). The Ath. Prât., however, says distinctly that, of the varieties of independent circumflex, "when followed by an acute or a circumflex, a quarter-mora is depressed" (iii. 65). And the Tâitt. Prât. (xix. 3) mentions it as "the opinion of some authorities that, in a circumflex that is followed by a circumflex [not by an acute, as well], a quarter-mora is depressed." The mode, however, of designating this peculiarity is in nearly all the texts a very conspicuous one, and involves an element of prolongation of the vowel suffering *kampa*, of which the Prâtiçâkhyas give no hint, and which is intimated by writing a figure, 3 or 1, after the vowel. Thus, the Rig-Veda writes *tishyò yáthâ* and *yò hyò vartanîh* as follows:

९. ति॒ष्यो॑३ यथा॑ । यो॑३ ह्ये॒ व॒र्तनिः॑ ।

If the affected vowel is short, the Rig-Veda writes a 1 instead of a 3 after it: thus,

१०. न्य॑३न्यं स॒हसा॑ ।
ny à-nyám sá-ka-sá

The Sâma-Veda (to which there is no known Prâtiçâkhyas), however, always lengthens the vowel in such a case—thus, *ny â-nyám*—and so writes a 3 after it, without exception. What is the proper usage in the Atharva-Veda is somewhat doubtful, since the known MSS. are very irregular and inconsistent in this whole class of cases; but the editors of the published text have adopted and carried out the method of the Rig-Veda. In the Tâittirîya-Sanhitâ, the modification is, in accordance with the doctrine referred to in its Prâtiçâkhyas, restricted to the case of a circumflex followed by a circumflex; the figure used is always 1, and the affected vowel, if short, is lengthened: thus,

11. दे॒व॒त्यां॑ꣳ क्ये॑तत् । सो॒ꣳ ज्यो॑ꣳ अभ्य॑म्रियत् ।
 de-va-tyāṅ̐ hy è-tát sò 'pò 'bhy à-mri-ya-ta

devatyāṅ̐ in the first example being from *devatyām*. The Vâjasaneyi-Sanhitâ alone leaves the quantity of the vowel unchanged, and uses no figure, but only a modification of the usual circumflex stroke beneath the vowel.

Whatever may be the origin of this peculiar doctrine and designation, it answers in the majority of texts (Rik, Sâman, Atharvan) a useful purpose by distinguishing in many cases an acute syllable from a *pracaya* grave after a circumflex. Thus, in the last examples quoted, the accentuation does not show us that the final *-tat* in the one case is acute, and that the final *-mriyata* in the other is *pracaya*, while, as written by the Rig-Veda — namely,

12. दे॒व॒त्यां॑ꣳ क्ये॑तत् । सो॒ꣳ ज्यो॑ꣳ अभ्य॑म्रियत् ।

the difference is brought clearly to light. But that this practical advantage had any thing to do with the development of the theory, is not lightly to be assumed. The designation seems to signify that the circumflex vowel, in order to the reduction of its latter portion to *anudatta* tone, or to a yet lower pitch, requires to be somewhat prolonged in quantity, either by a single added mora or by extension to three moras. But the whole subject is quite obscure, and I do not venture to enter here into the discussion of it, for fear of occupying much space without sufficient result.

It does not belong to what I have undertaken that I should consider at all the correspondences and differences of the Sanskrit and Greek with reference to the actual phenomena of accentuation — the clear evidences which they exhibit of an originally identical system, and of the abandonment of this system in part by the Greek, under the influence of the new law of cadence set forth in the preceding paper. These correspondences are most fully and clearly stated in Bopp's "Accentuations-system," a work which, though often wrong in matters of theory, is to be highly commended as a clear and comprehensive exhibition of the facts of which it treats.